

BRODER, D.L., red.; VESELKIN, A.P., red.; YEGOROV, Yu.A., red.;
ORLOV, V.V., red.; TSYPIN, S.G., red.; PODOSHVINA, V.A.,
red.; NIKITINA, T.K., red.; VLASOVA, N.A., tekhn. red.

[Problems in the physics of reactor shielding] Voprosy fiziki
zashchity reaktorov; sbornik statei. Moskva, Gosatomizdat,
1963. 345 p. (MIRA 16:12)
(Nuclear reactors--Shielding (Radiation))

ENP(j)/EPF(c)/EPF(n)-2/ENT(m)/BDS AFFTC/ASD/S8D Pc-4/
Pr-4/Pu-4 RM/WW/DM

L 12860-63

ACCESSION NR: AP3003970

S/0039/63/015/001/0017/0026

78

AUTHOR: Avayev, V. N.; Vasil'ev, G. A.; Veselkin, A. P.; Yegorov, Yu. A.;
Orlov, Yu. V.; Pankrat'yev, Yu. V.

TITLE: Reactor ¹⁹neutron flux attenuation in polyethylene¹⁵

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 17-20

TOPIC TAGS: neutron attenuation, polyethylene, polyethylene neutron attenua-
tion, slow neutron, fast neutron, neutron relaxation length, biological
shielding, water-water reactor

ABSTRACT: The attenuation of fast and slow neutron fluxes by polyethylene
has been investigated experimentally in a water-water research reactor. ¹⁹
A polyethylene 680 x 680 x 1000-mm prism consisting of square plates 10 and
20 mm thick was irradiated by placement in a recess in the heavy concrete
shielding of the reactor. The slow neutron fluxes were measured by the use of
resonant indicators (indium, iodine) and a BF₃ counter. The fast neutron
distribution was measured by means of threshold indicators P(n,p), Al(n,p),
and Al(n,α) and a scintillation counter with ZnS(Ag). During measurements the
plane indicators were inserted into gaps between the polyethylene plates, and

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the cylindrical indicators were placed into 20 x 20 x 100-mm holes cut in the plates. The results obtained are shown in Figs. 1 and 2 of the Enclosure, along with theoretical data obtained by the method of moments for a point neutron source. A comparison of neutron relaxation length in polyethylene (density, 0.92 g/cm³) and in water under identical conditions showed that the relaxation length in polyethylene is 12-17% shorter than that in water. The authors thank the reactor operating personnel and laboratory technicians who took part in the experiment." Orig. art. has: 2 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 25Aug63

DATE ACQ: 08Aug63

ENCL: 01

SUB CODE: NS

NO REF SCV: 004

OTHER: 004

Card 2/32

L 6941-65 EMB(j)/EMT(m)/EPT(c)/EMG(s)-2/EPT(n)-2/EMI(m)/EPR/EWA(h)/EWA(1)
 Fr-L/Ps-L/Pu-L/Pw-L/Peb DJ

ACCESSION NR: AP5005602

S/0089/65/018/002/0121/0127

AUTHOR: Vasil'ev, G. A.; Vaselkin, A. M.; Vagorov, Yu. A.
 Kucheryavov, V. A.; Pankov, V. A.

TITLE: Attenuation of reactor radiation by serpentine concrete

SOURCE: Atomnaya energiya, v. 18, no. 2, 1955, 121-127

TOPIC TAGS: reactor radiation, radiation shielding, serpentine concrete, shield, shield, shield, gamma radiation, reactor shielding

ABSTRACT: The shielding characteristics of concrete (density, 2.2 t/m³) in a water-moderated water-cooled research reactor. The distribution of fast neutrons under conditions of semi-infinite geometry, with various types of radioactive threshold indicators made of indium, promethium, and aluminum. Spectra of fast neutrons and gamma rays were measured. The results of the calculations and the experimental data are compared.

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L 26941-65

ACCESSION NR: AP5C05802

noticed in a total cross section of neutron interaction calculated for serpentine concrete. The results of measuring spectral neutron distribution can be used to obtain data required for multigroup calculation of the spatial distribution of neutrons in the shielding. With respect to neutrons, the shielding characteristics of the serpentine concrete investigated are somewhat better than those of limonite concrete; with respect to gamma rays, they are the same. Since the chemical composition of the concrete changes only at temperatures over 480C, it can be recommended as biological shielding in nuclear power plants for temperatures up to 450C. Orig. art. has: 3 tables and 4 figures. (AV)

ASSOCIATION: none

SUBMITTED: 21Feb64

ENCL: 00

SUB CODE: NP, MT

NO REF SOV: 012

OTHER: 001

ATD PRESS: 3189

Card 2/2

E 1129-63

ENP(j)/EPF(n)-2/ENT(m)/BDS

AFBTC/ASD/AFWL/SSD

Pc-4/Pu-4 RM/DM

S/0039/63/015/001/0020/0022 72

ACCESSION NR: AP3003971

AUTHOR: Avayev, V. N.; Vasil'yev, G. A.; Veselkin, A. P.; Yegorov, Yu. A.;
Orlov, Yu. V.; Pankrat'yev, Yu. V.

TITLE: Spectra of reactor fast neutrons¹⁹ passed through polyethylene¹⁵

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 20-22

TOPIC TAGS: fast neutron spectra, polyethylene, reactor shielding

ABSTRACT: Measurements were made of the spectra of fast neutrons after passage through a layer of polyethylene plates (680 x 680 x 10 mm) installed in a recess of the shielding of a water-water reactor. The thickness of the polyethylene layer was increased on the side facing of the spectrometer detectors. The measurements were made by means of a fast-neutron spectrometer with a single detector in which γ -background discrimination was achieved by means of a space charge between the last dynode and anode of the photomultiplier. The fast-neutron spectra were determined from the amplitude distribution of pulses produced by recoil protons in the stilbene crystal of the detector. The spectra were corrected for the effect of secondary neutron scattering in the crystal and for partial leakage of recoil protons from the crystal. The results obtained

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ACCESSION NR: AP3003971

are shown in Fig. 1 of the Enclosure along with the results calculated by the method of moments (shown by the solid line). The measured spectra were found to be in good agreement with theoretical results for all thicknesses of the polyethylene layer at $E_n > 3\text{Mev}$. At $E_n < 3\text{Mev}$ a divergence between the experimental and calculated results was noted. However, the tendency for a change in spectra with an increase in layer thickness in this energy range was the same for both calculated and experimental spectra. At neutron energies from 3 to 4 Mev and polyethylene thicknesses greater than 20 g/cm^2 , the curve of the measured spectra showed a sharper dip than that of the calculated spectra. This is probably due to some inaccuracy in selecting or averaging the cross sections during calculation. The sharper dip in the curve was also noted in neutron spectra measured in water. "The authors thank their coworkers who serviced the reactor and laboratory assistants who assisted in the carrying out of experiments." Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 25Aug62

DATE ACQ: 03Aug63

ENCL: 01

SUB CODE: NS

NO REF SOV: 003

OTHER: 002

Card 2/2

ACCESSION NR: AR4038006

8/0283/64/000/003/0011/0011

SOURCE: Ref. Zh. Yadernyye reaktory. Otdel'nyy vypusk, Abs. 3.60.51

AUTHOR: Avayev, V. N.; Vasil'yev, G. A.; Veselkin, A. P.; Yegorov, Yu. A.; Zhirnov, A. D.; Kucheryayev, V. A.; Orlov, Yu. V.; Panov, Ye. A.; Pankrat'yev, Yu. V.

TITLE: Shielding properties of certain types of concrete

CITED SOURCE: Sb. Vopr. fiz. sashchity reaktorov. M., Gosatomizdat, 1963, 193-198

TOPIC TAGS: radiation, concrete, neutron, gamma radiation, shielding, shield, radiation shielding, radiation shield, cement

TRANSLATION: Investigations that were conducted showed that heavy concrete gives more effective protection against neutrons and gamma-radiation. The addition of magnesium to the concrete somewhat increases the shielding properties as compared to concrete of Portland cement in the same density. The introduction of Boron compounds into the concrete greatly reduces the flow of thermal neutrons.

DATE ACQ: 17Apr64

SUB CODE: NP

ENCL: 00

Card 1/1

ACCESSION NR: AT4019056

S/0000/63/000/000/0229/0234

AUTHOR: Veselkin, A. P.; Yegorov, Yu. A.; Panov, Ye. A.

TITLE: The passage of Gamma-radiation through a flat slit in shielding

SOURCE: Voprosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 229-234

TOPIC TAGS: nuclear reactor, reactor shielding, Gamma ray propagation, Gamma ray attenuation, radiation shielding, shielding structure, lead shielding, steel shielding, plexiglass shielding

ABSTRACT: The authors studied the weakening effects exerted on radiation shielding by slits and discontinuities (heterogeneities), noting that existing formulas and techniques for computing the passage of radiation through slits and vacuums are applicable only if certain accepted limitations are fulfilled and in no case encompass the entire variety of possible slit and vacuum forms. As a source of γ -radiation a linear isotropic Co^{60} source was employed, which was simulated by the forward movement of an isotropic point source (See Fig. 1. in the Enclosure). The dose was measured by a scintillation γ -dosimeter. During

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ACCESSION NR: AT4019056

the experiment, the dose intensity was measured over a length of 160 mm along the shielding in a direction perpendicular to the slit. The authors investigated the dependence of the dose intensity behind a slitted shielding on the properties of the material used to fill the slit as well as on the properties of the materials of the shielding itself. As shielding materials, lead and steel were selected, while steel, titanium, aluminum, carbon (graphite with a density of 1.65 g/cm³) and organic glass (plexiglass) were used to fill the slit. In all measurements, the thickness of the shielding was 120 mm and the height of the slit - 20 mm. As expected, the intensity of the dose behind the shielding rises sharply as the specific gravity of the material filling the slit decreases. Thus, for example, when steel is replaced by aluminum, the dosage intensity opposite the center of the slit increases by a factor of 6.5. Explanations for this fact are advanced, and the concept of the specific dose (that is, the dose per unit length behind the shielding - $D_1 = \frac{D_s}{L}$, where D_s is the integral value of the dose of

gamma-radiation behind a slotted shielding; and L is the distance along the shielding within which the dose was measured) is introduced in order to shed light on certain observed laws. A graph is presented which shows a comparison of the degrees of weakening for different

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ACCESSION NR: AT4019056

materials used to fill the slit (See Fig. 2. in the Enclosure). The ordinate shows the ratio D_1/D (D is the specific dosage behind a continuous or unbroken shielding), while the density of the material filling the slit (g/cm^3) is indicated along the abscissa. The result permits a determination of the degree to which the shielding is weakened by the presence of a slit filled by any material, provided the dosage behind a continuous (unbroken) shielding (or behind a slitted shielding for any single slit material) is known. This method and certain variations of its application are analyzed. Orig. art. has: 1 formula and 8 figures.

ASSOCIATION: none

SUBMITTED: 14Aug63

SUB CODE: NP

DATE ACQ: 27Feb64

NO REF SOV: 001

ENCL: 02

OTHER: 003

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ACCESSION NR: AT4019056

ENCLOSURE: 01

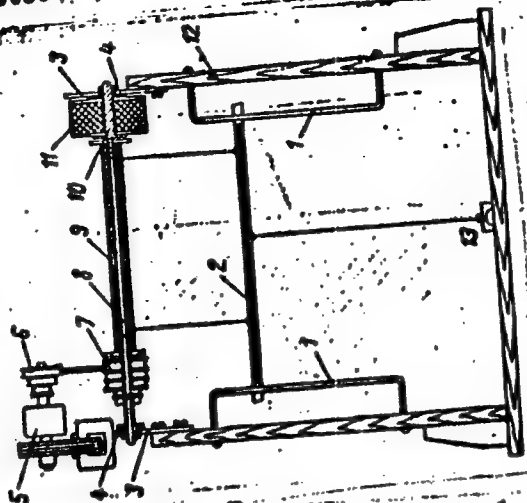


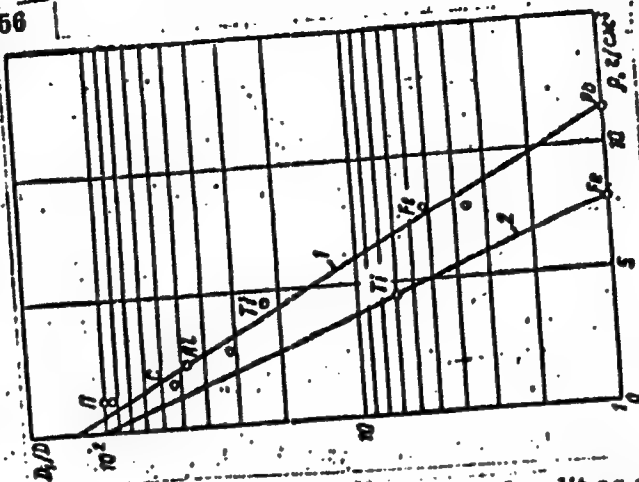
Figure 1.

Schematic drawing of the device for moving the source: 1 - guides; 2 - rod with source; 3 - brackets; 4 - bearings; 5 - SD-2 motor; 6 & 7 - pulleys; 8 - shaft; 9 - coil; 10 - armature of electromagnetic sleeve; 11 - electromagnet; 12 - stand; 13 - switch

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ACCESSION NR: AT4018056

ENCLOSURE: 02



Degree of weakening D_1/D of shielding by the presence of a slit as a function of the specific gravity of the material used to fill the slit: 1 — lead shielding; 2 — steel shielding; 0 — calculated values for steel, concrete and water; π — plexiglass; C — graphite ($\rho = 1.6 \text{ g/cm}^3$)

Card 5/5

ERODER, Dmitriy Leonidovich, doktor fiz.-mat. nauk; POPKOV, Konstantin Konstantinovich; RUBANOV, Stanislav Mikhaylovich; GLADKOV, G.A., kand. fiz.-mat. nauk, retsenzent; VESELKIN, A.P., kand. fiz.-mat. nauk, retsenzent; YEGOROV, Yu.A., kand. fiz.-mat. nauk, retsenzent; POLOGIKH, B.G., kand. fiz.-mat. nauk, retsenzent; VLASOVA, Z.V., red.; CHISTYAKOVA, R.K., tekhn. red.

[Biological shielding for ship reactors] Biologicheskaya zashchita sudovykh reaktorov. Leningrad, Izd-vo "Sudostroenie," 1964. 410 p. (MIRA 17:4)

...a previous work by V. G.
...the Soviet Union...
...the Soviet Union...
...the Soviet Union...

Card 1/2

- 5927-15

ACCESSION NR AP4012203

and tables The authors are grateful to A. T. ...

ASSOCIATION: None

SUBMITTED: 28May63

ENCL: 00

SUB CODE: NP

NO REF SOV. nqa

OTHER: 00

VASIL'YEV, G.A.; VESELKIN, A.F.; YEGOROV, Yu.A.; KUCHERYAYEV, V.A.;
PANKHAT'YEV, Yu.V.

Attenuation of reactor radiations by serpentine concrete. Atom.
energ. 18 no.2:121-127 F '65. (MIRA 18:3)

I 43694-66 ENT(m) IJP(c) JD/WB/JR

ACC NR: AP6021626

SOURCE CODE: UR/0089/66/020/003/0247/0252

AUTHOR: Veselkin, A. P.; Shakh, O. Ya.

ORG: none

TITLE: Effect of the cleaning system on the accumulation of active corrosion products in pressurized water reactors /9

SOURCE: Atomnaya energiya, v. 20, no. 3, 1966, 247-252

TOPIC TAGS: ~~reactor~~, pressurized water reactor, reactor corrosion, corrosion product, reactor cleaning, corrosion control, *CORROSION*, *NUCLEAR REACTOR TECHNOLOGY*

ABSTRACT: Processes of formation, accumulation, and transfer are discussed for activated corrosion products in pressurized water reactors, and the effect of the cleaning system on these products is considered. Solutions of differential equations are obtained and analyzed which describe processes for constant cleaning. It is shown that the efficiency of the cleaning system significantly affects the activity of water and corrosive deposits in the reactors. The authors wish to thank A. V. Nikitin for a useful exchange of information and discussions, and T. Ruch'yeva for her assistance in obtaining numerical computations. Orig. art. has: 2 figures and 27 formulas. Translation of author's abstract [AM]

SUB CODE: 18/ SUBM DATE: 03Aug65/ OTH REF: 008/

Card 1/1

L 05054-67 EWT(m)/EWP(t)/EPI IPI(g) JD/JR/GD
 ACC NR: AT6027929 SOURCE CODE: UR/0000/66/000/000/0141/0149
 AUTHOR: Veselkin, A. P.; Netecha, M. Ye.; Nikitin, A. V.
 ORG: None
 TITLE: Energy distribution of neutron dose rate in various shielding materials and compositions
 SOURCE: Voprosy fiziki zashchity reaktorov (Problems in physics of reactor shielding); sbornik statey, no. 2. Moscow, Atomizdat, 1966, 141-149
 TOPIC TAGS: radiation dosimetry, reactor shielding, neutron spectrum, neutron cross section
 ABSTRACT: A method is proposed for calculating dose rate from the entire neutron spectrum based on the use of three familiar ideas from the theory of ionizing radiation penetration through matter: the removal cross section method, the multigroup method for solution of the kinetic neutron transfer equation in the age-diffusion approximation and the concept of the "dosage accumulation factor" for neutron radiation similar in form to the corresponding concept for γ -quanta. The method is applicable only within limitations imposed by the removal cross section method and five-group calculation of neutron distribution in the age-diffusion approximation. It is shown that the introduction of a heavy moderator (e. g. iron, titanium, etc.) into a hydrogen-containing
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1. 05054-67

ACC NR: AT6027929

material increases the contribution made by intermediate neutrons to the total dose rate. A comparison of theoretical and experimental data shows a difference of less than 20% between calculated and measured dosage accumulation factors. This shows that the proposed method for calculating biological shielding gives sufficiently accurate data on the total radiation dose with respect to neutrons of all energies. Orig. art. has: 2 figures, 6 tables, 3 formulas.

SUB CODE: 18/ SUBM DATE: 12Jan66/ ORIG REF: 009/ OTH REF: 002

Card 2/2 *pla*

L 04596-67 EWT(m)/ENP(t)/ETI IJP(e) JD/HW/JG/NP/JK

SOURCE CODE: UR/0089/66/021/003/0184/0189

ACC NR: AP6032402

AUTHOR: Veselkin, A. P.; Nikitin, A. V.

ORG: none

TITLE: Activation of corrosion products in nuclear reactors

SOURCE: Atomnaya energiya, v. 21, no. 3, 1966, 184-189

TOPIC TAGS: nuclear reactor, nuclear debris, corrosion, water cooled reactor, water filter, mass flow rate, mass transfer, mathematic model

ABSTRACT: A study was made of the activation of corrosion products and their mass transport in pressurized and boiling water reactors. A mathematical model of the corrosion reactions and the mass transfer of corrosion products included a solution of a system of mass transfer equations for the steady state case and an approximate solution of the transient case during ^{60}Co buildup. Sets of mass transport equations are given for the full buildup of i elements in each section of a boiling-water reactor. The solutions, solved for t (operation time) $\rightarrow \infty$, indicated that the total amount of corrosion products in the reactor water is independent of the deposition rate and of the particle erosion rate. Two mass transport parameters were established: ω --the precipitation probability (sec^{-1}), and γ --the particle erosion probability (sec^{-1}). Since the total amount of corrosion products on reactor surfaces exceeds their concentration

UDC: 621.039.56

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L 04596-67

ACC NR: AP6032402

in water, $\omega \gg \gamma$. The transient solution for Co^{60} buildup on unexposed surfaces is given for the following restrictive condition: 1) $\lambda_0 t \gg 1$, $\omega t \gg 1$, and $\gamma t \gg 1$, where λ_0 is the time needed to clear the reactor water (constant); 2) the source of activation is not considered; and 3) the amount of radioactive impurities in the water is independent of time. Values of ω , γ , λ_0 , and ω/γ are tabulated for Fe^{59} , Co^{60} , Cu^{64} , Cr^{51} , Sb^{122} , and Sb^{124} . For holding times greater than 1000 hr, most samples had $\omega = 3.5 \cdot 10^{-5} \text{ sec}^{-1}$ and $\gamma = 5 \cdot 10^{-8} \text{ sec}^{-1}$. For a variety of holding times, ω ranged from $0.9 \cdot 10^{-5}$ to $5.0 \cdot 10^{-5} \text{ sec}^{-1}$ and γ ranged from $3 \cdot 10^{-8}$ to $7 \cdot 10^{-8} \text{ sec}^{-1}$. The relative mass transfer rates of Fe_2O_3 , Cr_2O_3 , NiO , and CuO are compared. The authors express their gratitude to M. A. Styrikovich and his co-workers for useful advice, as well as to V. V. Gerasimov and his co-workers. The authors also thank B. A. Alekseyev and D. Ya. Shakh for useful exchanges of ideas. Orig. art. has: 1 figure, 2 tables, 23 formulas.

SUB CODE: 18/
ATD PRESS: 5100

SUBM DATE: 27Dec65/

ORIG REF: 006/

OTH REF: 009

Card 2/2

ACC NR: AP7002163

SOURCE CODE: UR/0089/66/021/006/0462/0465

AUTHOR: Veselkin, A. P.; Shakh, O. Ya.

ORG: none

TITLE: Influence of the material lining of a reactor loop on the activity of the corrosive deposits

SOURCE: Atomnaya energiya, v. 21, no. 6, 1966, 462-465

TOPIC TAGS: nuclear reactor material, corrosion, radiation damage, radiation protection, surface active agent, mathematic model, stainless steel

ABSTRACT: This is a continuation of earlier work (Atomnaya energiya v. 21, 462, 1966), where a solution was obtained for the system of equations describing the formation and accumulation of activity in a primary reactor loop, the activity being due to corrosion products. In the present article, the mathematical model proposed in the earlier work is used to consider certain problems in radiation safety, connected with corrosion and activation of structural materials. By solving the system of equations with the aid of a computer under certain assumptions regarding the precipitation constant and washout process (these constants were defined in the earlier paper) it is shown that the influence of the surface material of the primary loop on the formation of active-surface deposits must be taken into account in all safety calculations. The validity of the mathematical model is checked against experimental results and is found to be adequate. It is recommended, in order to improve the

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UDC: 621.039.538.7: 621.039.58

ACC NR: AP7002163

radiation safety, that the steel employed in reactor construction contain no elements producing long-lived isotopes. The recommended materials are zirconium alloys for surfaces in the active zone, and carbon steel for the surfaces outside the active zone. Nickel-free stainless steel should be used for the water piping in the primary loop. The authors thank L. I. Korzhenevskaya and Ye. M. Voronova for help with the numerical calculations. Orig. art. has: 3 figures, 5 formulas, and 1 table.

SUB CODE: 18/ SUBM DATE: 09Mar66/ ORIG REF: 003

Card 2/2

L 28032-66 EPF(n)-2/EWT(m)/ETC(f)/ENG(m)

ACC NR: AP5026441

SOURCE CODE: UR/0089/65/019/004/0354/0359

AUTHOR: Vasil'yev, G. A.; Veselkin, A. P.; Yegorov, Yu. A.;
Moiseyev, G. G.; Pankrat'yev, Yu. V.

28
B

ORG: None

TITLE: Attenuation of pile radiation in serpentinite sand

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 354-359

TOPIC TAGS: nuclear reactor material, nuclear reactor shield

ABSTRACT: The use of serpentine rock for biological shielding is discussed. This mineral is found widely distributed in the Urals, Caucasus, Siberia and Kazakhstan, usually associated with asbestos deposits such as the Bazhenov quarries where pure serpentinite monoliths of about 1 cu m were excavated. Its bound water is liberated only at temperatures exceeding 450° C. Thus it can be used as a heat-resisting material for biological shielding. The concentration of hydrogen nuclei in serpentinite being about 1.5% by weight, is quite sufficient for insuring the attenuation of fluxes composed of intermediate and fast neutrons. The density of monolithic serpentinite is about 2.6 ton/cu m while the thermal conductivity varies between 2.16 and 2.56 kcal/m.hr. C. This material could be easily cut. The compression strength of blocks made of serpentinite is 621.039.538.4

2

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I 28032-66

ACC NR: AP5026441

0

tinite reaches 600 kg/sq cm. The shielding properties of serpentinite fine sand (from Bazhenov deposits) were tested in a water-cooled and water-moderated research reactor. The boxes filled with sand were placed close to the core vessel. The maximum thickness was about 180 cm. The sand density was 1.62 ton/cu m. The chemical composition given in a table shows that the serpentite sand includes 38.83% of SiO_2 and 37.39% of MgO . The investigations were carried out assuming "semi-infinite" and "energy barrier" geometry. The method of induced activity was used for determining the neutron flux attenuation, while the gamma dose rate was measured by means of a scintillation dosimeter. The macroscopic cross-section for fast neutrons in sand was calculated as 0.0602 cm^{-1} of which 45% was due to oxygen and 21% to hydrogen. The variations of cross sections in serpentite and its main components for different levels of fast neutron energy was shown in a graph. The peaks and dips in curves reflected the dependence of cross-sections upon the presence of oxygen. The attenuation of fast neutrons calculated on the basis of threshold measurements is also graphically illustrated. From these graphs and a table, it follows that the relaxation of neutron in serpentite sand is the same as in boron carbide. The protective properties of serpentite monolithical blocks are considerably higher than those of iron ore concentrates and only slightly better than those of serpentinite concrete. The spectra of fast neutrons were also determined and the

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ACC NR: AP5026441

energy distributions at 0, 30, 60, 100 and 140-cm thickness were plotted for various values of neutron flux. The greatest changes were observed for energy levels from 3 to 8 Mev. The relaxation length varies from 14.9 to 17 cm. The flux attenuation for thermal and epithermal neutrons was also investigated. A certain accumulation of neutrons was observed at small serpentite thicknesses. The relaxation was about 15.2 cm. This length is smaller than that (about 20 cm) obtained for iron ore concentrates. The attenuation of dose rates of fast and intermediate neutrons was the same for tested layer thicknesses. The dose relaxation was 15.2 cm. The gamma dose attenuation was 22 cm for a serpentite layer of 270 g/sq cm. The experiments showed that the serpentite sand is as good as the boron carbide. In conclusion, it was stated that the serpentite is not as good as the iron ore concentrate, although the monolithic serpentite has a lower relaxation length. The serpentite shielding properties could be improved by using a mixture consisting of 25% of serpentite and 75% of iron. The full neutron dose relaxation will be about 9 cm. ORIG. art. has: 4 tables and 5 graphs.

SUB CODE: 18 / SUBM DATE: 29Jan65 / ORIG REF: 11 / OTH REF: 3

Card 3/3 CC

ACC NR: AP7002169

(A, N)

SOURCE CODE: UR/0089/66/021/006/0509/0511

AUTHOR: Veselkin, A. P.; Nikitin, A. V.; Orlov, Yu. V.

ORG: none

TITLE: Investigations with the radiation loop of a water-water reactor

SOURCE: Atomnaya energiya, v. 21, no. 6, 1966, 509-511

TOPIC TAGS: water cooled nuclear reactor, reactor neutron flux, gamma flux, irradiation apparatus, radioactive source

ABSTRACT: The authors describe a test made to explain the possibilities of research with a water-water reactor, aimed at eliminating the undesirable presence of a wide range of mixed radiation with a wide energy spectrum. To this end, the water-water reactor was equipped with a radiation loop with a set of emitters of different geometric shape. The emitters were produced by passing high-purity water through the reactor, and using the irradiated water as a secondary source of radiation. The particular investigation was carried out with a source in the form of 8 mm tubing wound to make a disc of outside diameter 470 mm and inside diameter 30 mm. Measurements were made of the distribution of the γ quantum energy and of the radioactivity as functions of the distance to this type of source, and other source parameters are calculated. The radiation loop was also used to measure the relative concentration of the chemical forms of N^{15} produced in the water passing through the reactor. The loop is being reconstructed to increase its intensity. The authors thank A. V. Zhenikhova for sys-

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UDC: 621.039.573

ACC NR: AF/002169

tematic monitoring of the pH of the reactor water, V. V. Gerasimov for preparing the ion-exchange columns and for the measurements and a discussion of the results, Yu. G. Anisimov for help with the measurements and the data reduction, and the reactor crew for constructing and operating the loop. Orig. art. has: 2 figures and 6 formulas.

SUB CODE: 18/ SUBM DATE: 21Dec65/ ORIG REF: 001/ OTH REF: 004

Card 2/2

VESELKIN, G.A., staryiy nauchnyy sotrudnik

Extermination of flies on livestock farms. Veterinariya 41
no.6:106-109 Je '64. (MIRA 18:6)

1. Tyumenskiy opornyy punkt Vsesoyuznogo nauchno-issledovatel'skogo
instituta veterinarnoy sanitarii.

VESELKIN, N.P.

Localization of electric responses to the photic stimulation
of the eye in the brain of lampreys. Fiziol. zhur. 49 no.2:
181-185 F'64 (MIRA 17:3)

1. Laboratoriya sravnitel'noy fiziologii tsentral'noy nervnoy
sistemy Instituta evolyutsionnoy fiziologii imeni Sechenova,
Leningrad.

17(1)
AUTHOR:

Veselkin, N. P.

SOV/20-124-3-65/67

TITLE:

Effect of the Unilateral Removal of the Upper Cervical Sympathetic Ganglion on the Electric Activity of the Cerebellum in Pigeons
(Vliyaniye odnostoronnego udaleniya verkhnego sheynogo simpaticheskogo uzla na elektricheskuyu aktivnost' mozzhechka u golubey)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 723-725 (USSR)

ABSTRACT:

Certain common functional relations between the ganglion mentioned in the title and the cerebellum have been established on several occasions (Refs 5,8,11, et al.). The body of facts that have accumulated have enabled L. A. Orbeli to establish his theory of the ring-like interrelations between the above-mentioned sections of the nervous system; it is one of the integral parts of the theory of the adaptation-trophic function of the sympathetic nervous system and the cerebellum. The author carried out his experiments with 8 pigeons. They were conducted 2 - 3 days after the operation mentioned in the title. Figure 1 shows a cerebellogram of an intact pigeon. In figure 1 b, the changes emerging after unilateral sympathectomy are clearly visible. Contrary to the changes in the electrogram of the hemispherical cortex, the amplitudes of the fast oscillations fall by about the twofold (to 25mkv)

Card 1/2

SOV/20-124-3-65/67

Effect of the Unilateral Removal of the Upper Cervical Sympathetic Ganglion on the Electric Activity of the Cerebellum in Pigeons

and slow oscillations of 8 - 10 - 30 times/sec with amplitudes of 100 mkv emerge. From the above observations it can be concluded that the sympathetic system considerably affects the electric activity of the cerebellum. As a change in the blood circulation is out of the question after an extirpation of the sympathetic nerve, the above mentioned effect on the sympathetic system can be brought into relation with the adaptation-trophic function of the latter. The peculiarities, recorded in this process, of the said changes in pigeons may perhaps be connected with the degree of the phylogenetic development of their nervous activity. - There are 2 figures and 17 references, 13 of which are Soviet.

ASSOCIATION: Institut evolyutsionnoy fiziologii im. I. M. Sechenova Akademii nauk SSSR (Institute of Evolutionary Physiology imeni I. M. Sechenov of the Academy of Sciences, USSR)

PRESENTED: October 1, 1958, by L. A. Orbeli, Academician

SUBMITTED: September 24, 1958

Card 2/2

KARAMYAN, A.I., KOSAREVA, A.A., ORIOORYAN, R.A., ~~VESELKIN, N.P.~~

"Functional and morphological evolution of cortico-cerebellar interrelations."

Report submitted, but not presented at the 22nd International
Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

VESELKIN, N.P.

Electrical responses of the brain to photic stimulation in skates.
Fiziol. zhur. 40 no.3:268-271 Mr '64.

(MIRA 18:1)

1. Laboratoriya sravnitel'noy fiziologii tsentral'noy nervnoy sistemy
Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova AN SSSR, Le-
ningrad.

VESELKIN, N.V.

The formation of hexose phosphate in diabetic muscle poisoned by iodoacetic acid. N. V. Veselkin and V. M. Veselkina. *J. Physiol.* (U.S.S.R.) 22, 300-4 (in German; 304) (1937).—The diabetic muscles of rats after poisoning with iodoacetic acid show a large increase in hexose phosphate after exercise, approximating that of normal muscle. This is attributed to the activation of traces of insulin by the free phosphoric acid formed. S. A. K.

COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										COMMON VARIANTS INDEX									
<p>ca</p> <p>VESEKIN, N. V.</p>										<p>The significance of sympathetic innervation for the effect of muscle training. N. V. Veselkin and N. N. Yakovlev. <i>Bull. Biol. Med. Exptl. U. S. S. R.</i> 400(1969). <i>Zentr. Gewerbehyg. Unfallverhdt.</i> 17, 170(1940); cf. C. A. 30, 2001. Rabbits in which the left sympathetic nerve had been extirpated were subjected to muscle training. Subsequently, glycogen and glutathione were detd. in the semitendinosus and biceps femoris of both hind legs. The increase of both substances produced by training was smaller in the sympathectomized muscle. Sympathetic innervation, therefore, plays an essential role in training. Increase in tonus of the sympathetic nervous system should obviously exert a favorable influence on muscle training and contribute to as high an effect of activity as possible. Ruth Berggren.</p>										<p>11F</p>									
<p>ASM-31A METALLURGICAL LITERATURE CLASSIFICATION</p>																													
<p>1970-1971</p>										<p>1972-1973</p>										<p>1974-1975</p>									

111

CA VESELKIN, N.V.

Effect of denervation and tenotomy on phosphorylating capacity of muscle. N. V. Veselkin and V. M. Veselkina. *Vys. Zbir. S.S.S.R.* 33-34-35-36 (1947). -- The gastrocnemius muscle of the cat was denervated by section of the sciatic nerve or was rendered tonless by section of the Achilles tendon. At intervals of one week, the phosphorylating capacity was determined by incubating the muscle in the presence of glycogen and dext. the decrease in free P₄. In the denervated muscle, there was a small decrease in phosphorylating capacity after one week, and after 2 weeks a marked decrease (sometimes 50% or more). In the muscle after tenotomy, there was also a decrease in phosphorylating capacity, but much less than in the denervated muscle. B. A.

Physiol. Inst. in Pavlov, AS USSR

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610011-9

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610011-9"

~~VESELKIN, N.V.~~

USSR/Medicine - Pathophysiology

FD-2559

Card 1/1 Pub. 17-12/23

Author : Veselkin, N. V.; Gordon, V. G.

Title : ~~Some aspects of metabolism in dogs with Eck-Pavlovian fistula during~~
 : use of a group of remedies for the purpose of prevention or elimina-
 : tion of the symptoms of poisoning

Periodical : Byul. eksp. biol. i med. 5, 43-45, May 1955

Abstract : Investigated the prophylactic and curative effect of glucose,
 : sodium bromide, and phosphoric acid on food poisoning in dogs
 : with Eck-Pavlovian fistula. Two references, USSR, since 1940.

Institution : Laboratory of the Biochemistry of Nutrition and Digestion (Head -
 : Prof. A. M. Petrun'kina) of the Institute of Physiology imeni
 : I. P. Pavlov (Director - Academician K. M. Bykov) of the Academy
 : of Sciences USSR, Leningrad

Submitted : February 18, 1954 by Academician K. M. Bykov.

USSR / Human and Animal Physiology (Normal and Pathological). Blood. Blood Pressure. Hypertonia T

Abs Jour: Ref Zhur-Biologiya, No 21, 1958, 97574

Author : Veselkin, N. V., Il'in, V. S.

Inst : Not given

Title : Synthesis of Ethero-Sulfuric Acids in an Organism
After Denervation of the Liver

Orig Pub: V Sb.: Materialy po evolyuts. fiziologii, T. I.
M.-L., AN SSSR, 1956, 85-90

Abstract: No abstract

Card 1/1

41

VESELKIN, N.V.; DAUDOVA, G.M.; IL'IN, V.S.

Method of determining the ability of tissues to synthesize reducing
phosphorus organic compounds. Mat. po evol. fiziol. 1:76-78 '56.
(PHOSPHORUS ORGANIC COMPOUNDS) (MIRA 11:1)
(TISSUE CULTURE)

vesnikin, n.v.
VESNIKIN, N.V.; IL'IN, V.S.

Synthesis of ethereal sulfuric acids in the organism following liver
denervation. Mat. po evol.fiziol. 1:85-90 '56. (MIRA 11:1)
(LIVER--INNERVATION) (ETHEREAL SULFATES)

~~VYESYELKIN, N.~~ VESYELKIN, N.
USSR/Human and Animal Physiology - Liver.

v-8

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4138

Author : N. Vyesyelkin, Bl Gordon

Inst : -

Title : Central Nervous System Intoxication in Cases of Disturbed Activity of the Liver.

Orig Pub : Vopr. med. khim., 1956, 2, No 5, 350-356

Abstract : In 4 dogs with Bkk-Pavlov fistulas and gastric fistulas, one studied the role of putrefaction processes in the intestine in the development of intoxication of the central nervous system (CNS). Dogs tolerated a milk diet better than a meat diet. In some cases, when blood NH_3 was high, there were no manifestations of intoxication. Addition of kefir to a milk diet did not prevent the /intoxication/ which was usually taking place after a meat diet. Addition to meat of biomyacin or syntomyacin with phtalazol slowed down the development of the :

Card 1/2

USSR/Human and Animal Physiology - Liver.

V-8

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4138

intoxication. The amount of ether-sulfuric acids in urine was lower after the addition of biomyein to a milk-bread diet, and of syntomycin to a meat diet. It is probable that, under conditions of a disturbed liver-barrier, not only NH_3 but also products of the putrification of proteins in the intestine have a toxic effect upon the CNS.

Card 2/2

VESELKIN, N.V.; GORDON, B.G.

Some characteristics of metabolism in dogs with an Eck-Pavlov fistula
in poisoning of the central nervous system. Trudy Inst.fiziol. 5;
425-439 '56. (MIRA 10:1)

1. Laboratoriya biokhimi i pitaniya i pishchevareniya. Zaveduyushchiy
A.M.Petrun'kina.
(METABOLISM) (NERVOUS SYSTEM)

VESELKIN, N.V.; GORDON, B.G.

Use of glutamic acid to prevent ammonia intoxication in dogs following
Mek-Pavlov fistulization. Dokl.AN SSSR 107 no.2:333-336 Mr '56.

(MIRA 9:7)

1. Institut fiziologii imeni I.P.Pavlova Akademii nauk SSSR. Predstavle-
no akademikom K.M.Bykovym.

(PORTAL VEIN) (VEIN CAVA) (GLUTAMIC ACID)

Veselkin, N. P.

mil Use of glutamic acid for prevention of ammonia poisoning
in dogs with Eck-Pavlov fistula. N. V. Veselkin and B. G.
Gordon. Doklady Akad. Nauk S.S.S.R. 107, 323 (1956).
—Introduction of glutamic acid into dogs previous to ad-
ministration of NH_4Cl prevents the NH_3 poisoning which
develops otherwise. The NH_3 and glutamine curves in the
blood are shown for typical expts. G. M. Kozlov.

2

VESELIN, N.V.; DAUDOVA, G.M.; IL'IN, V.S.

Acid-soluble phosphorus fractions in the mammary glands of rabbits
and the activity of glands in synthesizing reducing phosphorus
organic compounds. Met.po evol. fiziol. 1:79-84 '57. (MIRA 11:1)
(MAMMARY GLANDS)
(PHOSPHORUS ORGANIC COMPOUNDS)

VESELKIN, N.V.; GORDON, B.G.

Variation in nitrogen metabolism in the brain in cases of liver disorders. Trudy Inst.fiziol. 8:520-525 '59. (MIRA 13:5)

1. Laboratoriya biokhimii nervnoy sistemy (zaveduyushchiy - G.Ye. Vladimirov) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(NITROGEN METABOLISM) (BRAIN)
(LIVER--DISEASES)

VESELIN, N.V.; GORDON, E.G.

Changes in the cerebral ammonia and glutamine content in animals following surgical disturbance of liver function. Biul. eksp. biol. i med. 47 no.3: 34-38 Mr '59. (MIRA 12:7)

1. Iz laboratorii biokhimii tsentral'noy nervnoy sistemy (zav. - chlen-korrespondent AMN SSSR G.Ye. Vladimirov) Instituta fiziologii imeni I.P. Pavlova Akademii nauk SSSR, Leningrad. Predstavlena deystv. chlenom AMN SSSR V. N. Chernigovskim.

(LIVER, physiol.

eff. of exper. lesions on brain ammonia & glutamine (Rus))

(BRAIN, metab.

ammonia & glutamine, eff. of exper. liver lesions (Rus))

(GLUTAMINE, metab.

brain, eff. of exper. liver lesions (Rus))

(AMMONIA, metab.

same)

VESELKIN, P. N.

BC

A - 4

**Disappearance of trypan-blue from the blood
in experimental cancer and leukemia. P. N.
Veselkin (Moscow). Dokl. Akad. Nauk SSSR, 1967, (4), 801-807.**
**Trypan blue disappears more rapidly from the blood
of neoplastic than of normal animals; this is not
characteristic of C₅₇B₆/F₁ although it always
accompanies malnutrition. P. G. M.**

VESELKIN, P. N. 13C

Pathogenesis of traumatic shock. P. N. VESELKIN (Proc. Shock Congress, Kiev, 1937, 109-118).—Extracts of traumatized muscle start a hypotensive and a hyperthermic effect when injected into the blood stream, but not muscles of healthy animals. Transfusion of blood of animals in shock (dogs) into healthy animals gives no effect. Shock is thus not due to toxic products released into the blood stream. Shock could in all cases be induced by painful stimulation of the sciatic nerves; after severe trauma (crushing of muscles and bones) wide individual variations in propensities to shock were found. Lowering of blood pressure was caused by traumatization of denervated limbs, or of limbs with an intact nerve supply, but receiving blood from another animal. Loss of blood or plasma is a secondary factor in shock production. Shock is attributed to disturbances in the tone of the central nervous system. R. T.

VESELIN, P.

Discussion on N. A. Shtakelberg's article "Development of febrile reactions in animals in administration of pyrogens into various localizations". *Fiziol. zh. SSSR* 38 no.3:391-394 May-June 1952.
(CIWL 23:2)

VESELIN, P.N.

Present state of fever. Arkh. pat., Moskva 14 no.43-20 July-Aug
1952. (CML 23:2)

1. Corresponding Member of the Academy of Medical Sciences USSR.
2. Of the Department of General Pathology at State Institute for the Advanced Training of Physicians imeni S. M. Kirov and of the Department of General Pathology of the Institute of Experimental Medicine of the Academy of Medical Sciences USSR.

[N.]
VESELKIN, P., Prof.

Shtakel'berg, N. A.

To the editor of the "Physiological Journal of the U.S.S.R."; concerning N.A. Shtakel'berg's article "Chills and fever reaction in animals to pyrogenic substances depending upon the site of their introduction into the organism." Fiziol.zhur. 38, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

VESELIN, P.N. (Leningrad).

Historical evaluation of Russian pathology in the seventies and eighties;
more about F.R.Borodulin's "historical concept" and the "fight" of Russian
pathology with S.P.Botkin. Fiziol.zhur. 39 no.5:662-672 S-0 '53.

(MLRA 6:10)

(Pathology) (Borodulin, I.R.) (Botkin, Sergei Petrovich, 1832-1889)

VESELKIN, P.N. (Leningrad)

More about the principles of Pavlov's physiology in the reconstruction of
the theory of respiration regulation. *Fiziol.smr.* 39 no.6:742-754 N-D '53.
(MLRA 6:12)

(Respiration) (Veselkin, P.N.)

VESELKIN, P.N.

USSR/General Problems of Pathology - Pathophysiology of
Infectious Process.

T-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12616

Author : Veselkin, P.N.

Inst : Not given

Title : A Study of the Mechanism of Development of the Fever
Reaction and Its Significance in the Pathogenesis of
Infectious Process and Therapy.

Orig Pub : V sb.: Yezhegodnik. In-t eksperim. med. Akad. med. nauk
SSSR, 1955, L., 1956, 121-127.

Abstract : No abstract.

Card 1/1

"APPROVED FOR RELEASE: 09/01/2001

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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001859610011-9"

FD-2711

VESELKIN, P. N.
USSR/Medicine - physiology

Card 1/1 Pub. 33-20/28

Author : Veselkin, P. N.

Title : A simple modification of a device for momentary determinations of oxygen consumption in small animals

Periodical : Fiziol. zhur. 41, 108-112, Jan-Feb 1955

Abstract : Describes a modification of a closed-type apparatus for momentary determinations of oxygen consumption in small animals at 5- to 22-minute intervals. Lists as co-workers: N. A. Ehtakel'berg, Ye. S. Zykinov, L. I. Gorbatshevich, G. M. Murav'yeva, N. A. Volokhovoy, and L. I. Dvinyaninova. Also states the author used the initial modification at the Chair of General Pathology of the Military Medical Academy in 1946. Diagram; photographs; graph.

Institution : Department of Pathology, Institute of Experimental Medicine, Academy of Medical Sciences USSR, Leningrad

Submitted : February 5, 1953

VESELKIN, P.N., professor; **ABRAKOV, L.V.**, redaktor; **KHARASH, G.A.**, tekhnicheskii redaktor.

[Physiological mechanisms of fever reaction; collection of works of the Department of General Pathology of the Academy of Medical Sciences and the Department of General Pathology of the Leningrad Kirov State Institute of Advance Training for Physicians] *Fiziologicheskie mekhanizmy likhoradochnoi reaktsii; sbornik rabot Otdela obshchei patologii IIM AMN SSSR i Kafedry obshchei patologii Leningradskogo GIDUV im.S.M. Kirova.* Pod red. P.N. Veselkina. [Leningrad] Gos.izd-vo med.lit-ry. Leningradskoe otd-nie, 1957. 353 p. (MIRA 16:4)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut eksperimental'noy meditsiny. Otdel obshchei patologii. 2. Chlen-korrespondent Akademii Meditsinskikh Nauk SSSR (for Veselkin). (FEVER)

VESELKIN, P.N.

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22019.

Author : ~~Veselkin~~ P. N.

Inst : Not given.

Title : Mechanism of Febrile Reaction. Preliminary
Methods of Study.

Orig Pub: Fisiol. mekhanizmy likoradochn reakcii, L.,
Medgiz 1957, 9-13.

Abstract: No abstract.

Card 1/1

30

VESELKIN, P. N.

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22020.

Author : ~~Veselkin~~ P. N.

Inst : Not given.

Title : Physiological Mechanisms of Febrile Reaction.

Orig Pub: Fisiol. mekhanizmy likhoradochn. reakcii, L., Medgiz 1957, 14-25.

Abstract: No abstract.

Card 1/1

VESELKIN, P. N.

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22021.

Author : Veselkin P. N.

Inst : Not given.

Title : Heat Regulation of the Febrile Body and the
Significance of Heat Production and Heat Loss
in Body Temperature Elevation.

Orig Pub: Fisiol. mekhanizmy likoradochn. reakcii, L.
Medgiz, 1957, 29-39.

Abstract: The febrile reaction (FR) is not conditioned
by disorder of the heat regulation mechanism.
In overheating, the body increases its heat
loss - while in FR there is a decrease of
heat loss. The heat regulating mechanism

Card 1/2

31

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22021.

Abstract: preserves its ability to react to temperature changes in the external environment in the presence of Fr. There is no direct and constant relationship between the elevation of temperature and the intensity of the axidative processes in FR. The ratio of heat loss to heat production in FR is a function of the temperature of the external environment.

Card 2/2

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22025.

Author : Veselkin P.N., Zykina-Gramenitskaya E.S.

Inst : Not given.

Title : The Role of the Principle Vascular Reflexogenic Areas in the Development of Febrile Reactions.

Orig Pub: Fisiol mekhanizmy liknoradoohn reakcii, L., Medgiz, 1957, 125-134.

Abstract: The intravenous injection in rabbits of a culture of *Bacillus Mesentericus* failed to produce a Febrile Reaction (F.R.) following the bi-lateral resection of the sin-carotid areas of carotid arteries; the injection of the culture before the resection produced a noticeable elevation of body temperature. The rein-

Card 1/2

U.S.S.R. / Human and Animal Hysiology. Thermoreg- T
ulation.

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22025.

Abstract: jection of the culture 2-3 months after the re-
section again produced a F.R. Subsequently the
two depressor nerves in the animals were sec-
tioned in the neck. The injection of the cul-
ture one week later produced a weaker F.R.
than prior to the section. Rabbits with resec-
ted sino-caotid areas, when injected subcutan-
eously with the culture during the period re-
fractory to intravenous injection, developed a
prolonged F.R. The sino carotid areas and de-
pressor nerves play a definite role in the form-
ation of F.R. in experimental intravenous in-
jections of pyrogenic solutions; the exclusion
of the receptor areas can be compensated.

Card 2/2

35

VESELKIN, P.N.

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22031.

Author : ~~Veselkin, P.N.~~

Inst : Not given.

Title : The Biological Significance of Febrile Reaction and Some Practical Considerations.

Orig Pub: Fisiol mekhanizmy liknoradochn reakcii, L., medgiz, 1957, 333-342.

Abstract: Febrile reactions occur as a complex reflex act. Consideration of any temperature elevation of the body as harmful is erroneous. Experimental research and clinical investigation show evidence of favorable effects of fever on the course and outcome in many diseases, part-

Card 1/3

42

U.S.S.R. / Human and Animal Physiology. Thermoregulation.

T

Abs Jour: Ref Zhur-Biol.; No 5, 1958, 22031.

Abstract: icularly in infections and toxemias. Fever favors the production of antibiotics and the establishment of immunity. The nature of the changes in the internal environment in fever cannot be identified with the effect of overheating, which in most cases negatively affects the course of experimental infections in animals. The basic biological significance of fever should be considered in conjunction with increased metabolism conditioned by higher tissue temperatures.

Fever is a phylogenetically derived Typical
Adaption reaction to infectious irritants

Card 2/3

U.S.S.R. / Human and Animal Physiology. Thermoregulation. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22031.

Abstract: under pathological conditions. The possibilities of therapeutic application of artificial fever are far from being exhausted. Further study of this important problem requires the organisation of production of pyrogenic solutions of low toxicity.

Card 3/3

43

VESELKIN, P.N.; SOROKIN, A.V.

Report on the meetings of the Society of Pathophysiologists of
Leningrad City. Pat. fiziol. i eksp.terap. 6 no.6:92-93 N-D'62
(MIRA 17:3)

VESELKIN, P.N.

Thermogenetic changes in infectious inflammatory states. Pat.
fiziol. i eksp. terap 5 no.5:16-24 '61 (MIRA 17:4)

VESELKIN, P.H., professor

Letter to the editor. Pat.fiziol. i eksp.terap. 1 no.4:64 J1-Ag '57.
(MIRA 10:11)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR.
(FEVER) (PARATYPHOID FEVER)

VERNIKIN, P.N., professor (Leningrad)

When the temperature rises. Zdorov's 3 no.9;14-15. 8 '57. (MIRA 10:9)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR
(BODY TEMPERATURE)

VESELIN. P.M.

Some problems in general pathology of heat regulation and heat
exchange. Vest. AMN SSSR 12 no.4:61-71 '57. (MIRA 10:10)
(BODY TEMPERATURE)

VESELKIN, P.N.

USSR/Human and Animal Physiology. Thermoregulation.

T-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55357.

Author : Veselkin, P. N.

Inst

Title : Biological Significance of Febrile Reactions.

Orig Pub: Arkhiv patologii, 1957, 19, No 1, 3-20.

Abstract: In contradiction to the theory which defines fever (F) as a functional insufficiency of the thermoregulatory mechanism, and as an inability to decrease the body's temperature to normal, data and opinions are cited which favor the concept that the adaptive functions of the thermoregulatory mechanism remain untouched and are fully preserved at all times. Only in certain infectious diseases, during the late and final stages of such a disease which have to be con-

Card : 1/3

USSR/Human and Animal Physiology. Thermoregulation.

T-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55357.

sidered its specific complication, insufficiency of the thermoregulatory mechanism may be observed. From the biological point of view, F is a specialized reaction of the thermoregulatory apparatus and is strongly connected to the general reactivity of the body. The temperature increase in F is not invariably bound to the increase in gaseous interchange. An important factor here is the difference between F and simple hyperthermia, for in the latter the gaseous interchange grows in proportion to the increase in body temperature according to the Vant-Hoff Maxim, while in the case of F, the general level of oxidizing processes is limited by the high point of the increase in body temperature. In infectious processes and intoxications, F plays a positive role as it stimulates a number of defensive mechanisms, such as immuno-

Card : 2/3

USSR/Human and Animal Physiology. Thermoregulation.

T-3

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55357.

genesis, phagocytosis, the defensive functions of the liver and of other organs, the secretion of ACTH and of corticosterones. The increase in body temperature during heavy physical work presents an analogy to F. Also discussed here is the utilization of standardized pyrogens for purposes of therapy, applied side by side with hypothermia and hyperthermia.

Card : 3/3

24

VASHUKIN, P.N.

Definition of the concept 'disease'. Vest. AMN SSSR 13 no. 9:24-29 '58
(MIRA 11:10)

1. Onlen-korrespondent AMN SSSR.
(DISHABE,
definition, (Rus))

VESELKIN, P.N., prof.

Symposium on the physiology and pathology of heat exchange and thermal regulation. Vest. AMN SSSR 14 no.9:57-61 '59. (MIRA' 13:1)

1. Chlen-korrespondent AMN SSSR.
(BODY TEMPERATURE)

VESELKIN, P.N., prof.

"Inflammatory diseases of the female genitalia from the point of view of the theory of nervism" by A.M.Mandel'shtam. Reviewed by P.N.Veselkin. Sov.med. 23 no.6:152-153 Je '59.
(MIRA 12:9)

1. Chlen-korrespondent AMN SSSR.
(GENERATIVE ORGANS, FEMALE--DISEASES)
(MANDEL'SHTAM, A.M.)

VESELKIN, P.N. (Leningrad)

Symposium on the physiology and pathology of heat exchange and
its neurohumoral regulation. *Fiziol.zhur.* 45 no.8:1034-1036
Ag '59. (MIRA 12:11)
(BODY TEMPERATURE--REGULATION)

KHARAUZOV, N.A., prof., glavnyy red.; MIKHAYLOV, V.P., prof., zamestitel' glavnogo red.; BIRYUKOV, D.A., prof., otv.red.; AVETIKYAN, B.G., doktor biol.nauk, red.; ANICHKOV, N.N., akademik, red.; ANICHKOV, S.V., prof., red.; ARBUZOV, S.Ya., prof., red.; VESELKIN, P.M., prof., red.; VOYNO-YASEVITSKIY, M.V., prof., red.; DANILOV, I.V., kand.biol.nauk, red.; ZHABOTINSKIY, Yu.M., prof., red.; ZHINKIN, L.N., prof., red.; IL'IN, V.S., red.; IOFFE, V.I., prof., red.; KARASIK, V.M., prof., red.; KUPALOV, P.S., prof., red.; MANINA, A.A., kand.med.nauk, red.; NEYFAKH, S.A., doktor biol.nauk, red.; RIKKL', A.V., prof., red.; SVETLOV, P.G., prof., red.; SMORODINTSEV, A.A., prof., red.; CHISTOVICH, G.N., doktor med.nauk, red.; BESEDIN, I.K., tekhn. red.

[Yearbook of the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R. for 1958] Ezhagodnik za 1958 god. Leningrad, 1959. 538 p. (MIRA 14:1)

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